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cons.aa	G G G V	A K	E
hTGfBR-II	LDTLVGKGRFAEVYKAJLKQNTSEQFETVAVKIFPYDHYASWKDRKDIFSDINLKHENILQF		
mActR-IIB	LLEIKARGRFGCVWKAQLMN-----DFVAVKIKPLQDKQSWQSEREIFSTPGMKHENLLQF		
mActR-II	LLEVKARGRFGCVWKAQLLN-----EYVAVKIFPIQDKQSWQNEYEVYSIPGMKHENILQF		
daf-1	LFGRVGSGRFGNVSRGDYRG-----EAVAVKVFNAIDEPAFHKEIEIFETRMLRHPNVLRY		
subdomains	I	II	III IV

hTGfBR-II	LTAEERKTELCKQYWLITAFHAKGNLQEYLRHVISWEDLRNVGSSSLARGLSHLHSDHTP-C
mActR-IIB	IAAEKRGSNLEVELWLITAFHDKGSLIDYLGKNIITWNECHVAETMSRGISYLNHEDVPWCR
mActR-II	IGAERGTSDVDLWLITAFHEKGSLSDFLKANVSWNELCHIAETMARGLAYLHEDI PGLK
daf-1	IGSDRVDTGfVTELWLVI EYHPSGSLHDFLLENTVNIETYYNLMRSTASGLAFLHNQIGGSK
subdomains	V VI-A

cons.aa	DLK N	DFG
hTGfBR-II	-GRPKPIVHRDLKSSNILEVNDLTCCLCDPGLSLRL---GPYSSVDDLANSQGVGTARYMAP	
mActR-IIB	GECHKPSIAHRDFKSKNVLLKSDLTAVLADFGGLAVRF---EPGKPPGD--THGQVGTRRYMAP	
mActR-II	-DGHKPAISHRDIKSKNVLLKQNLTAIADPGLALKF---EAGKSAGD--THGQVGTRRYMAP	
daf-1	-ESNKPAMAHARDIKSKNTIMYKNDLTCAIGDLGLSLSKPEDAASDI IAN--ENYKCGTVRYLAP	
subdomains	VI-B	VII VIII

Fig. 1

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a.a C C E G N M C
5' GCGGATCCTGTTGTGAAGGNAATATGTG 3' Fig. 2A
BAMHI C C G C

a.a V A V K I F
5' GCGGATCCGTCGCAGTCAAAATTTT 3' Fig. 2B
BamHI G C G G C
T T T A

a.a R D I K S K N
5' GCGGATCCGCGATATTAAAAGCAA 3' Fig. 2C
BAMHI A C C GTCT
G A

a.a E P A M Y
5' CGGAATTCTGGTGCCATATA Fig. 2D
EcoRI G G G
A A

M G A A A K L A F A V F L I S C S S G A I L G R A C I R - I I
M T A P W A A L A L L W G S S L C C A C S C R G E A C I R - I I B
M G R G L L R G L W P L H I V L W T R I A S T I P M E A P P H V Q K S V N M D M I V T O M N G A V T R R - I I
M T Q L Y I Y I R L L G A Y L F I I S R V Q G Q M L D S M L H G T G M K S D S O Q K K S E A L K - 3
M V D G V M I L P V L I M I A L P S P A L K - 1
M T L G S A A P R P K L L L L V L A A A T R R - 1 / A L K - 5
M L L R S S G K L M V G T M K E A L K - 6

[illegible][illegible]

Fig. 3

[illegible][illegible]

ACTR-11
 ACTR-118
 TRR-11
 TRR-1/ALK 5
 ALK-1
 ALK-2
 ALK-3
 ALK-4
 ALK-6

Fig. 3 contd.

[illegible]

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K	H	E	K	R	G	I	S	V	D	L	W	L	I	T	A	F	H	E	K	G	S	L	S	D	F	L	K	A	N	V	V	S	W	Actr-II	
K	H	E	K	R	G	S	N	L	E	V	E	L	I	T	A	F	H	D	K	G	S	L	T	D	Y	L	K	A	N	V	I	T	W	Actr-IIB	
K	H	E	K	R	K	T	E	L	G	K	Q	Y	I	A	F	H	A	K	T	R	R	Y	Q	E	Y	L	T	R	M	Y	I	S	W	TBR-II	
K	H	E	K	R	K	D	N	G	I	T	Q	L	W	L	I	V	S	H	M	Q	R	L	F	D	Y	L	T	R	Y	T	V	T	TBR-I/ALK-S		
K	H	E	K	R	G	S	N	L	E	V	E	L	I	T	A	F	H	E	K	G	S	L	Y	D	Y	L	Q	L	K	A	N	V	E	P	ALK-1
K	H	E	K	R	G	S	N	L	E	V	E	L	I	T	A	F	H	E	K	G	S	L	Y	D	Y	L	Q	L	K	A	N	V	E	P	ALK-2
K	H	E	K	R	G	S	N	L	E	V	E	L	I	T	A	F	H	E	K	G	S	L	Y	D	Y	L	Q	L	K	A	N	V	E	P	ALK-3
K	H	E	K	R	G	S	N	L	E	V	E	L	I	T	A	F	H	E	K	G	S	L	Y	D	Y	L	Q	L	K	A	N	V	E	P	ALK-4
K	H	E	K	R	G	S	N	L	E	V	E	L	I	T	A	F	H	E	K	G	S	L	Y	D	Y	L	Q	L	K	A	N	V	E	P	ALK-6

7

≥

E	L	C	H	I	A	E	T	M	A	R	G	L	A	Y	L	H	E	D	I	P	-	G	L	K	D	G	H	K	P	A	I	S	H	R	D	I	K	S	K	M	V	L	A	C	T	R	-	I
M	E	C	H	V	A	S	T	M	A	R	G	L	S	Y	L	H	E	D	I	P	W	C	R	G	E	G	H	K	P	S	I	A	H	R	D	L	K	S	K	M	V	L	A	C	T	R	-	I
E	L	C	H	K	L	G	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G	L	A	H	L	H	M	V	E	I	-	-	-	G	T	Q	Q	G	K	P	A	I	A	H	R	D	L	K	S	K	M	I	L	V	T	R	-	I
E	L	C	H	K	L	A	S	L	A	R	G																																					

vib

VIA

Fig. 3 contd.

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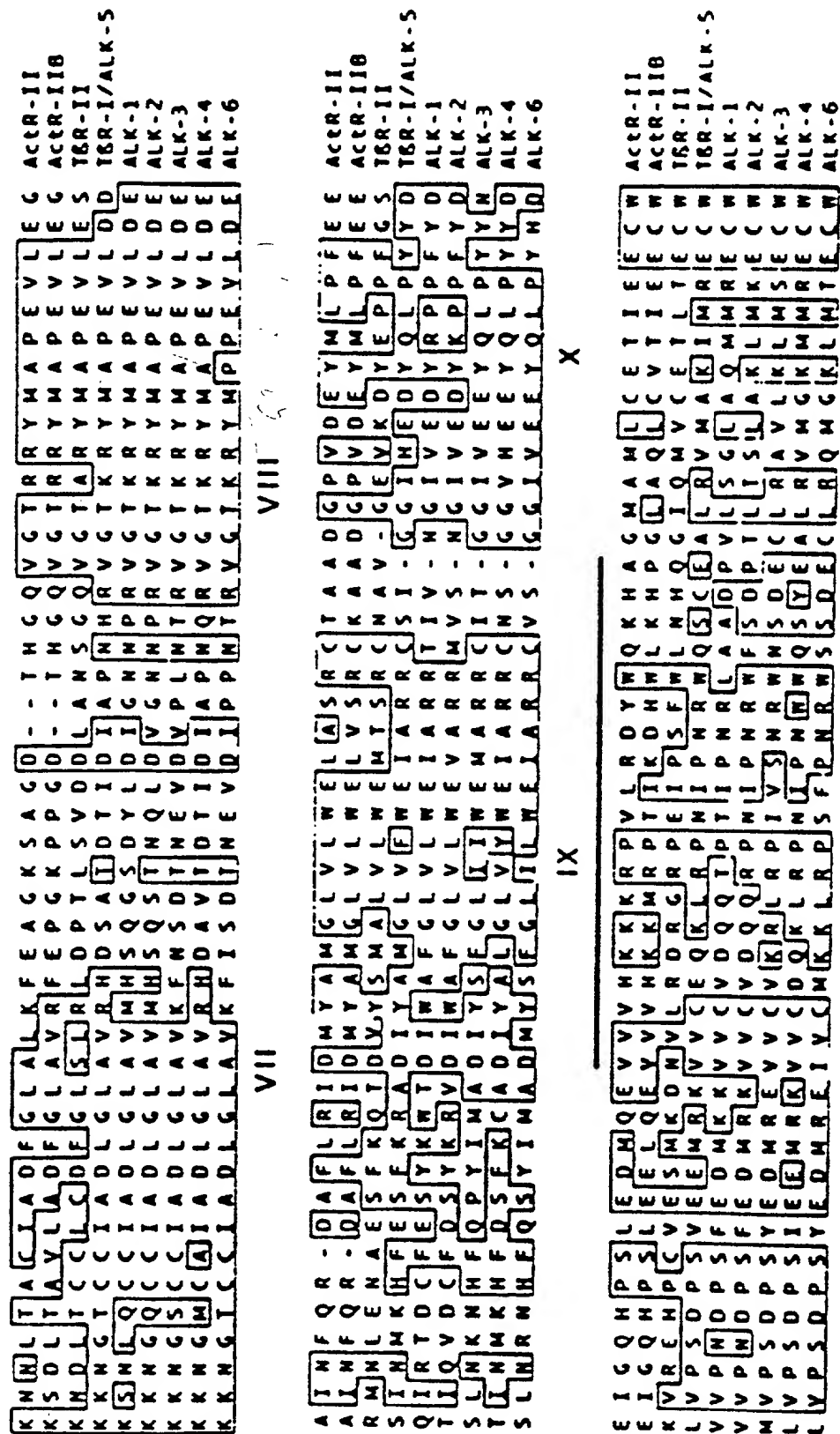


Fig. 3 contd.



P K E S S L (513)
 P K E S S I (536)
 K (567)

Fig. 3 contd.

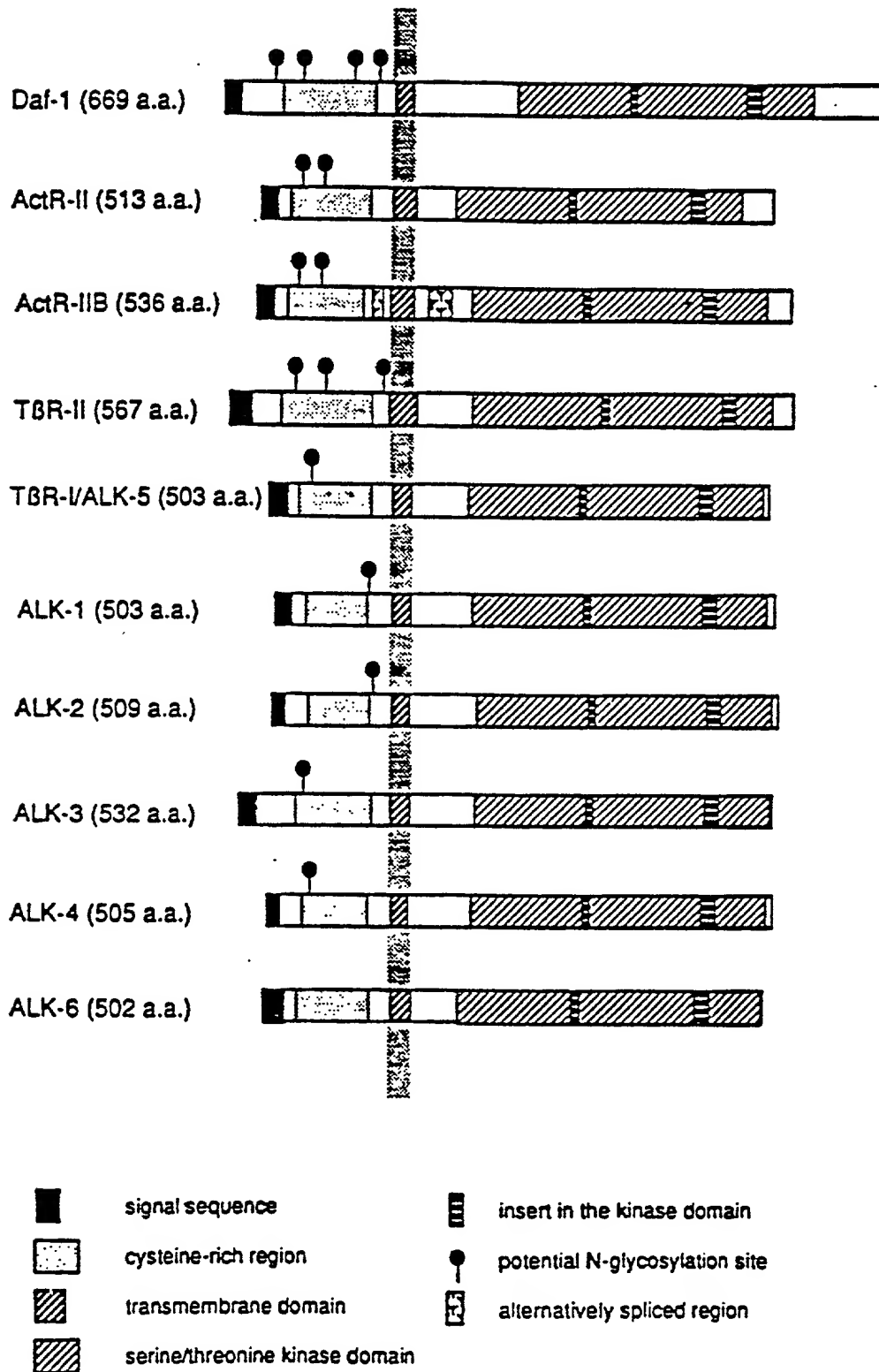


Fig. 4

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ALK-2	ALK-3	ALK-4	ALK-5	ActR-II	ActR-IIB	TBR-II	daf-1	
79	60	61	63	40	40	37	39	ALK-1
	63	64	65	41	39	37	39	ALK-2
		63	65	41	38	37	39	ALK-3
			90	41	40	39	42	ALK-4
				42	40	41	43	ALK-5
					78	48	35	ActR-II
						47	32	ActR-IIB
							34	TBR-II

Fig. 6

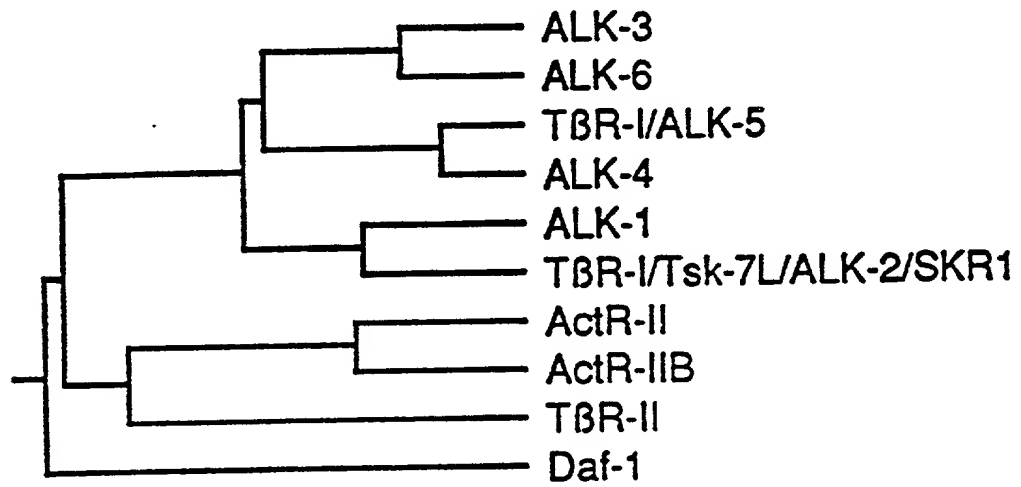


Fig. 7